

CHAPTER 15

PREPARATION OF PROJECT

The basic necessity of an entrepreneur is to decide upon a project. Success of any enterprise depends on the selection of right project. Thus project is the foundation for any venture. Establishing oneself as a good entrepreneur depends mainly upon choosing a good idea for project. Entrepreneur cannot succeed in this venture without a good project. Innovation and vision form an integral aspect of a project programme.

15.1 MEANING OF PROJECT

The project is a 'scientifically evolved work plan' devised to achieve a specific objective within a specified period of time. The dictionary meaning of a project is that 'it is a scheme, design, a proposal of something intended or devised to be achieved'. Each project differs in size, nature, objectives and complexity. Project management scholars emphasize that a project is an unique and non-repetitive activity which aims at systematically coordinating inputs in the direction of intended outputs. General economists and bankers have defined a project in different ways. Some of them are presented below.

"Project is an approval for a capital investment to develop facilities to provide goods and services" – The World Bank.

"Project is a non-routine, non-repetitive, one-off undertaking normally with discrete time, financial and technical performance goals" – Harrison.

"A project typically has a distinct mission that it is designed to achieve and a clear termination point, the achievement of the mission" – Newman, Summer and Warren.

"A Project is any scheme or a part of scheme for investing resources which can be reasonably analysed and evaluated as an independent unit. It may be item of investment activity which can be separately evaluated". – Little and Mirless.

"A project is the whole complex of activities involved in using resources to gain benefits". – Gillinger.

"A project is a scientifically evolved work plan devised to achieve a specific objective within a specified period of time". – Vasanth Desai.

The projects may differ in size, nature, aims, time and complexity, but they have three basic attributes common viz.,

- A course of action
- Specific objectives
- Definite time duration

Classification of project:

Different authors have classified projects in different ways. Following are the major classification of projects:

(i) Quantifiable and non-quantifiable projects:

(Projects for which a right quantitative assessment of benefits can be made are termed as quantifiable projects. Projects related to power generation, mineral development, industrial development etc., are examples of quantifiable projects.) Projects for which quantitative assessment cannot be made are termed as non-quantifiable projects. Projects involving health, education and defence are some examples of non-quantifiable projects.)

(ii) Sectoral projects:

Projects are classified based on different sectors. Some examples are:

- Automobile sector
- Agricultural sector
- Power sector
- Health sector
- Education sector
- Transport sector
- Manufacturing sector
- Food processing sector
- Mining sector
- Irrigation sector
- Miscellaneous sector, etc.

PAA, HTM FEMM

(iii) Techno-Economic projects:

Projects can be classified based on techno-economic characteristics. This classification has three groups.

(a) Factor Intensity-oriented classification:

Based on intensity of factors, projects may be classified as capital intensive or labour intensive. If a large investment is made in plant and machinery, then such projects are called capital intensive. On the other hand, if

the projects involving large numbers of human resources are termed as labour intensive.

(b) Cause-oriented classification:

Under this, projects are classified as demand based or raw material based. The existence of demand for some goods or services makes the project demand-based and the availability of raw material, skill or other resources make the project raw material based.

(c) Magnitude oriented classification:

Projects are classified on the basis of magnitude of investment. Based on this, the projects may be classified as large scale, medium scale and small-scale projects, depending upon the level of investment in project.

Project classification based on techno-economic characteristics is found useful in facilitating the process of feasibility appraisal of the project.

15.2 PROJECT IDENTIFICATION

A project having good market is generally selected as a project by any entrepreneur. Hence identifying project is a crucial step in any business and plays a vital role. An entrepreneur will have a wide choice of projects.

Project identification is concerned with collection of economic data, compiling and analyzing it to identify the possibility of investment to produce the goods or service for making profit.

According to Peter F. Drucker, there are three types of opportunities: additive, complementary and break through. Utilizing of the existing resources and facilities without any change in the business are known as additive opportunities. There is no risk involved in this type of opportunities. The opportunities involving new ideas that cause some change in the existing structure are known as complementary opportunities. There is some amount of risk involved in this type. Break through opportunities involve fundamental changes in both character and structure of business. This type involves higher risk than the other two.

Project identification may come from one or other of the following ways.

(i) Observation: Observation is one of the very important sources of project idea. The scarcity of a particular product or service may lead to the development of that. The available of raw material or skill may lead to an idea of utilizing them to produce goods. Observations of existing processes/products also sometimes leads to new project ideas.

- (ii) **Trade and professional magazines:** Trade and professional literature keeps a person in touch with latest developments and trends and also stimulate to develop new ideas.
- (iii) **Bulletins of Research Institutions:** R & D bulletins of some institutions also provide some new ideas based on the findings which are published in the bulletin.
- (iv) **Government sources:** Departmental publications of various departments of Government also provide useful information that can help in identification of new project ideas.

The project ideas can be discovered from various sources. They are given below.

- (i) Knowledge of potential customer need.
- (ii) Watching emerging trends in demands for certain products.
- (iii) Knowledge about the Government policy, concessions and incentives, list of items reserved for manufacture in SSIs.
- (iv) Ideas generated by concerned people.
- (v) Scope for producing substitute product.
- (vi) Visiting trade fairs, exhibitions of new products etc.
- (vii) Observation of market and similar products.
- (viii) Competitor's products.
- (ix) Ideas given by friends and relatives based on their intuition and observation.

All of these sources put together may give a few ideas about the possible projects to be examined as the final project. This process is known as "opportunity scanning and identification".

15.3 PROJECT SELECTION

Project selection starts from where project identification ends. After identifying some projects, these are analyzed in the light of existing economic conditions, the government policies, target markets, profit, availability of raw materials and skills etc. One of the well-known tools for this analysis is SWOT or SCOT analysis. This is the analysis of strengths, weakness or constraints, opportunities and threats.

The entrepreneur analyses all the strengths of the enterprise like skills, manpower, capital, technology etc., with respect to this product. Then the weakness or constraints are listed down with an idea to find means to overcome them. The various opportunities that emerge with the development of the product are studied. This includes market share, profit, life of product, export

possibilities etc. Finally the threats like competition, import of similar product into market, government policies, technological obsolescence etc, are analysed. SWOT analysis is a very useful tool in all situations.

The other points to be considered in selection of a project are listed below:

- (i) **Technology:** The technology required to develop the project should be available within or preferably available indigenously. It makes life easier to start with. It may be difficult and costly to get technology through foreign collaboration.
- (ii) **Equipment:** The availability of equipment should be studied. The entrepreneur should select the best equipment available for the project.
- (iii) **Investment size:** The study of investment required is to be made rationally and accurately. Wrong estimation may lead to shortage of funds in the middle or towards the end of project.
- (iv) **Location:** Suitable location of project is very important. The entrepreneur should locate the project where resources and raw material are available. He should also consider possibility of setting up the project at notified area by Government, to avail certain facilities, concessions and subsidies.
- (v) **Marketing:** The product should be marketable. One should estimate the correct/reliable demand and market share for his product.

15.4 PROJECT REPORT- NEED AND SIGNIFICANCE

(A project report is a written document pertaining to any investment proposal. It contains relevant data on which the project has been appraised and found relevant. It is a course of action what the entrepreneur wants to do in his business and the means to do it. Thus the preparation of project report is of great significance for the entrepreneur. The project report essentially serves two functions: (It serves as a road map describing the direction of the enterprises, its goals and how to achieve them) It also serves to attract investors and lenders.) The preparation of project report is beneficial for those entrepreneurs seeking financial assistance from financial institutions and commercial banks. Financial institutions provide financial assistance based on project report. A project report is prepared by an expert after detailed study and analysis of the various aspects of a project. It gives the complete analysis of the inputs and outputs of the project. It enables the entrepreneur to understand, at the initial stages, whether the project is sound in technology, commercial aspects, financial and marketing aspects.

There is no substitute for a well-prepared project report. The more concrete and complete the project report, the more likely it is to gain quick

acceptance by outsiders, investors, banks and other supporting and approving agencies. (Hence the project report needs to be prepared with great care and consideration.)

15.5 CONTENTS OF PROJECT REPORT

The following are the contents of a good project report.

(i) General information:

The report should contain general information regarding the company, product profile and product details and specifications.

(ii) Promoter:

The details of promoter, name, educational qualifications, work experience, project related experience etc., are to be provided.

(iii) Location:

Details like exact location of project, lease or own, location advantages etc., are to be indicated.

(iv) Land and Building:

Details of area of land, built up area, type of construction, cost of construction, plant layout, detailed plan and estimate are to be included.

(v) Plant and Machinery:

Details of machinery required, their capacities, suppliers, cost, various alternatives etc, are to be included.

(vi) Capital requirement and cost:

Information about all items of costs should be carefully collected and presented.

(vii) Operational requirement and cost:

Information about operational costs should be presented. They include cost of raw materials, fuel, power, utilities, labour, repair and maintenance, overheads etc.

(viii) Production process:

Description of production process, process chart, technical know how, alternate technologies, production programmes etc., are to be provided.

(ix) Raw material:

List of raw material required, its quality and quantity, sources of supply, cost, tie-up arrangements if any, alternate raw material, alternate suppliers etc., are provided.

(x) Man power:

Details of manpower required, skilled, semi-skilled, sources of man power supply, cost of manpower, and cost of training if required, are provided.

(xi) Products:

Products produced, by-products, product mix, product quality and standard etc, are to be mentioned.

(xii) Market:

Target users, distribution channels, selling price, trade practices, sales promotion, and estimated sales are to be included.

(xiii) Economic analysis:

Profits, return on investment, breakeven, market share, exporting etc., are made and included.

(xiv) Working capital:

Requirement of working capital, source of working capital, nature and extent of credit facilities available, offered and required are to be provided.

(xv) Requirement of funds:

Break-up of project cost in terms of cost of land, buildings, machinery, miscellaneous assets, preliminary expenses and working capital are to be included.

15.6 PROJECT FORMULATION

Project formulation is the systematic development of a project idea for the eventual purpose of arriving at an investment decision. It involves a step-by-step investigation and development of a project. It is a process involving the joint efforts of a team of experts. Each member of the team must be fully familiar with the broad strategies, objectives and other aspects of the project.

Normally small scale industries do not include sophisticated techniques in preparing project reports.

A general set of information given in project reports is listed below:

- (i) General information
- (ii) Project description
- (iii) Market potential
- (iv) Capital costs and sources of finance
- (v) Assessment of working capital requirement
- (vi) Other financial aspects
- (vii) Economic and social variables
- (viii) Project implementation.

(i) General Information:

The general information to be included in the report are:

- (a) **Biodata of promotor:** Name and address, qualifications, general experience and experience in proposed area of project of the entrepreneur and his partners if any.
- (b) **Industry profile:** A reference of analysis of industry to which the project belongs, eg., past performance, present status, its organization, its problems etc.
- (c) **Constitution and organization:** The constitution and organizational structure of the enterprise, in case of partnership firm, its registration with the Registrar of firms, application for getting registration certificate from the Directorate of Industries/District Industry Centre.

(ii) Project description:

A brief description of the project covering the following aspects is given in the project report.

- (a) **Site:** Location of enterprise, owned or leasehold land, industrial area, no objection certificate from Municipal/Concerned Authorities etc.
- (b) **Physical infrastructure:** Availability of infrastructures like raw materials (requirement, availability, source of supply, whether imported or indigenous) and skilled labour (required, availability, training needs etc).
- (c) **Utilities:** The details of utilities like: power required, requirement of fuel and water should be clearly stated in the project report.
- (d) **Pollution control:** The points like nature and scope of dumps, sewage system, emissions if any are to be mentioned.
- (e) **Communication system:** Details of availability of communication facilities like telephones, telefax etc.
- (f) **Transport facilities:** Requirement of transport, mode and need of transport are to be included.

- (g) **Machinery and Equipment:** A complete list of machinery and equipments required indicating the specifications and features, sources of supply, cost of machinery and equipment are to be furnished in the report.
- (h) **Capacity of the plant:** The installed and licensed capacity of the plant along with details of shifts requirements should be mentioned.
- (i) **Technology selected and R & D activity:** The technology selected, source of technology and know-how, any Research and Development activity proposed in future are to be included.

(iii) Market Potential:

Details like the projected market potential, demand and supply situation, projected price, marketing strategy, distribution channels, after-sales-service, mode of distribution, requirement of logistics etc., are to be provided in the report.

(iv) Capital costs and Sources of Finance

Detailed estimates of various capital items like land and buildings, plant, machinery, cost of installation, source of finance like owners stake, details of loan if any, name of bank/Financial institutions etc., are to be mentioned in the report.

(v) Assessment of working capital requirement

The requirement of working capital with sources of supply should be clearly stated in the report.

(vi) Other Financial Aspects

Other financial aspects like cost of production, projected profit, expected sales, revenue, projected profit and loss account, cash flow statement should be presented in the report. Break Even Analysis should be prepared and presented. Break-Even is the level of production/sales at which no profit/no loss situation exists.

(vii) Economic and Social variables

As a part of social responsibility, any damage to the society and the cost to control such damages, abatement costs, requirement of pollution control, effluent treatment and costs involved for the same etc., are to be mentioned in the report.

In addition to this, other details like employment generation, utilization of local resources, development of the local area, development of ancillaries, import substitution, any export potential etc., are to be included in the report.

(viii) Project Implementation

At the end, details of schedule of implementation of the various tasks of the project are to be included.

15.7 SPECIMEN OF A PROJECT REPORT

Based on the above explanation, a sample of a project report is presented here:

Project Report for Manufacturing Unit

1. PRODUCT DESCRIPTION
2. PRODUCTION AND GENERAL EVALUATION OF PROSPECTS:
3. MARKET ASPECTS
 - (i) Target users:
 - (ii) Sales Channels & Methods of distribution:
 - (iii) Geographical Extent of Market
 - (iv) Competitive Situation:
 - (a) Domestic Market
 - (b) Export Market if any
 - (v) Market needed for plant described:
4. PRODUCTION REQUIREMENTS
 - (i) Annual Capacity (One/Two/Three-Shift Operation)
 - (ii) Capital Requirements for Land & Buildings on rent

Equipment, furniture and fittings

Working capital
 - (iii) Total capital which the entrepreneur would need for the whole project:
 - (i) Own
 - (ii) Borrowings (amount and sources)
 - (iv) Expected net profit per annum
5. CAPITAL REQUIREMENTS
 - (i) Fixed assets and working capital

- (a) Land (....sq. metres) and Building(....sq. metres) (at Rs. per annum)
- (b) Equipments:
 - (i) Production Equipment,
 - (ii) Other Tools & Equipment
 - (iii) Furniture and Fittings
- (c) Working Capital (Rs)

(ii) Raw Material & Allied Supplies (Annual)

Description	Qty.	Rate Rs.	Annual Requirements
1. Material – 1			
2. Material – 2			
3. Material – 3 etc.,			
4.			
5. Power, Fuel & Water			
6. Maintenance & spares			
7. Other Supplies			
			Total

(iii) Manpower (Annual)

Description	No.	Rate per month (Rs.)	Annual Cost Rs.
Manager			
Foreman			
Supervisors			
Skilled Workers			
Semi-Skilled Workers			
Unskilled Workers			
Office Staff			
Others			
			Total

(iv) Other Costs (Annual)

- (a) Depreciation on equipment, furniture & fittings / Annum
- (b) Interest on capital (fixed and working) per annum
- (c) Administrative Costs
- (d) Sales cost (Including Sales Commission, Advertisement, etc)
- (e) Provision for discount, bad debts and miscellaneous contingencies
- (f) Training costs

6. Total Annual Costs, Sales Revenue and net profits

- (a) Annual Costs
 - (i) Rent for Land & Buildings
 - (ii) Raw Materials and Allied Supplies
 - (iii) Manpower
 - (iv) Other Costs
- (b) Annual Sales Revenue
- (c) Expected Annual Net Profit ($b - a$)
- (d) % Profit on Own Capital
- (e) % Profit on Total Annual Sales Turnover
- (f) % on Total Investment

7. Remarks:

Signature

Date:

15.8 GUIDELINES BY PLANNING COMMISSION FOR PROJECT REPORT

Planning Commission of India issued some guide lines for preparing / formulating realistic project reports. The project formulation stage involves the identification of investment options by the enterprise and in consultation with the Administrative Ministry the Planning Commission and other concerned authorities. The summary of the guidelines by Planning Commission are presented here:

(i) General Information:

The feasibility report must include the analysis of the industry to which it

belongs. The report should deal with description of type of industry, its priority, past performance, increase in production, role of public sector, technology, allocation of funds and information about the enterprise.

(ii) Preliminary Analysis of Alternatives

The details like gap between demand and supply of proposed products, availability of capacity, list of all existing plants in industry, indicating their capacity, level of production attained, list of present projects and list of proposed projects. All technically feasible options are considered here. Location of plant/project, requirement of any foreign exchange, profitability, Return on Investment, alternative cost calculations etc., are to be presented.

(iii) Project Description

The feasibility report should provide a brief description of the technology / process selected for the project, information pertaining to the selection of optimal location, population, water, land, environment, pollution and other environmental problems etc., are to be provided.

The report should contain details of operational requirements of the plant, requirement of water, power, personnel, land, transport, construction details for plant and offices etc.

(iv) Marketing plan:

The details like marketing plan, demand, target price of product, distribution methods etc., are to be presented.

(v) Capital Requirements and Costs

Information with regard to capital requirement and costs with breakup are to be provided. The estimates should be realistic and based on logical information.

(vi) Operating Requirements and costs

The costs incurred after the commencement of commercial production are called operating costs. Cost of raw material, fuel, power, salaries, repair and maintenance, rent, selling and marketing expenses, transport, interest burden if any etc., are some examples of operating costs. All these are to be provided in detail.

(vii) Financial Analysis

Financial analysis is essential to assess the financial viability of the project.

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A proforma balance-sheet, details of depreciation, clearance for foreign exchange, details of any income tax rebate, incentives for backward word areas are to be included.

(viii) Economic Analysis

Social profitability analysis is to be made. Impact of the operations on foreign trade, direct costs and benefits are to be included in the report.

(ix) Miscellaneous aspects

Depending upon the nature and size of operation of a particular project, any other relevant information may be included in the project report.

15.9 NETWORK ANALYSIS:

Network is a set of symbols connected with each other with a sequential relationship with each step making the completion of a project/event. A business plan or any project contains various activities. Any delay in any activity will effect the other activities, project is delayed, costs will go up leading to reduced profit. A number of networking techniques have been developed for project scheduling. They are:

- (i) Programme Evaluation and Review techniques (PERT)
- (ii) Critical Path Method (CPM)
- (iii) Line of Balance (LOB)
- (iv) Graphical Evaluation and Review Techniques (GERT)
- (v) Work shop Analysis and Scheduling Programme (WASP)

Among these, PERT and CPM are the most widely used network analysis techniques in project management.

15.9.1 Importance of Network Analysis

The network analysis helps in identifying the hidden stages involved in project estimates. By identifying them the management can improve on the ongoing project estimates and learn for future use. The following are some of the points that speak about the importance of network analysis.

- (i) The whole project has to be considered with reference to the sequence of activities and events. Sequence means activities that are to follow one after another leading to an event.
- (ii) The events should be considered as different branches of operations.
- (iii) The different segments of the project are treated as separate network